

PROJECT DESCRIPTION

I. GENERAL

THIS PORTION OF THE PROJECT INVOLVES THE INSTALLATION OF A NEW TRAFFIC CONTROL SIGNAL WITH STREET LIGHTING AT THE INTERSECTION OF MD 543 AND C.MILTON WRIGHT HIGH SCHOOL LOCATED IN HARFORD COUNTY, MARYLAND.

II. INTERSECTION OPERATION

THE PROPOSED TRAFFIC SIGNAL WILL OPERATE IN A NEMA FOUR (4) PHASE, FULL-TRAFFIC ACTUATED MODE AND WILL UTILIZE A TIME CLOCK FOR DAILY SCHOOL OPERATIONS AND WILL OPERATE IN A FLASH MODE DURING NON-SCHOOL EVENTS. QUEUE DETECTORS ALONG THE C. MILTON WRIGHT APPROACH WILL BE WIRED INTO THE PROPOSED CONTROLLER TO ACTIVATE THE SIGNAL DURING SCHOOL EVENTS THAT ARE NOT COVERED IN THE TIME PERIODS OF THE TIME CLOCK. THE PROPOSED SIGNAL WILL BE TIED INTO EXISTING H IBS. THE MD 543 APPROACHES WILL OPERATE CONCURRENTLY, WITH AN EXCLUSIVE/PERMISSIVE LEFT TURN PHASE FOR SOUTHBOUND MD 543. THE C MILTON WRIGHT APPROACH WILL OPERATE SEPARATELY.

A NEW EIGHT PHASE FULLY TRAFFIC ACTUATED CONTROLLER WITH TWO (2) FOUR CHANNEL RACK MOUNTED LOOP DETECTOR AMPLIFIERS, TELEMETRY MODULE, RELAY PACKAGE, AND INTERSECTION MONITOR WITH BATTERY BACK UP HOUSED IN A NEMA SIZE SIX (6) BASE MOUNTED CABINET WILL BE INSTALLED AT THE INTERSECTION.

A RELAY PACKAGE WILL BE ADDED TO EACH OF THE EXISTING POLE MOUNTED H.I.B. CABINETS AND WIRED INTO THE PROPOSED INTERSECTION BASE MOUNTED CABINET.

III. SPECIAL NOTES

- THE SIGNAL SHOP WILL BE NOTIFIED TO PERFORM INTERNAL WIRING OF THE CABINET AT MD 543 AND C. MILTON WRIGHT. ALL CABLE SHALL BE IDENTIFIED AND BROUGHT INTO THE CONTROLLER BY THE CONTRACTOR. THE CONTRACTOR SHALL NOTIFY MR. EDWARD RODENHIZER, SHA SIGNAL SHOP AT (410) 787-7650 SEVENTY-TWO (72) HOURS IN ADVANCE OF THIS WORK.
- MOT PLATES FOR THIS PROJECT WILL BE AS FOLLOWS: 104.00 TO 104.00-12, 104.02-01, 104.03-01.
- UPON COMPLETION OF THIS PROJECT THE CONTRACTOR SHALL NOTIFY MR. ROBERT SNYDER OF SHA AT (410) 787-7635 TO ARRANGE FOR THE PHONE LINE INSTALLATION. THE CONTRACTOR IS TO PROVIDE MR. SNYDER WITH THE NEAREST STREET ADDRESS, ZIP CODE AND PHONE.

THE FOLLOWING CONTACT PERSONS FOR DISTRICT # 4 ARE AS FOLLOWS:

Mr. David Malkowski,
District Engineer
Phone: (410) 787-7630

Mr. Randall Scott
Assistant District Engineer-Traffic
Phone: (410) 321-2781

Mr. Dave Ramsey
Assistant District Engineer-Maintenance
Phone: (410) 321-2761

Mr. Joseph McMahon
Acting District Engineer-Utility
Phone: (410) 321-2841

Mr. Richard Baff
Chief, Traffic Operations Division
Phone: (410) 787-7360

EQUIPMENT LIST

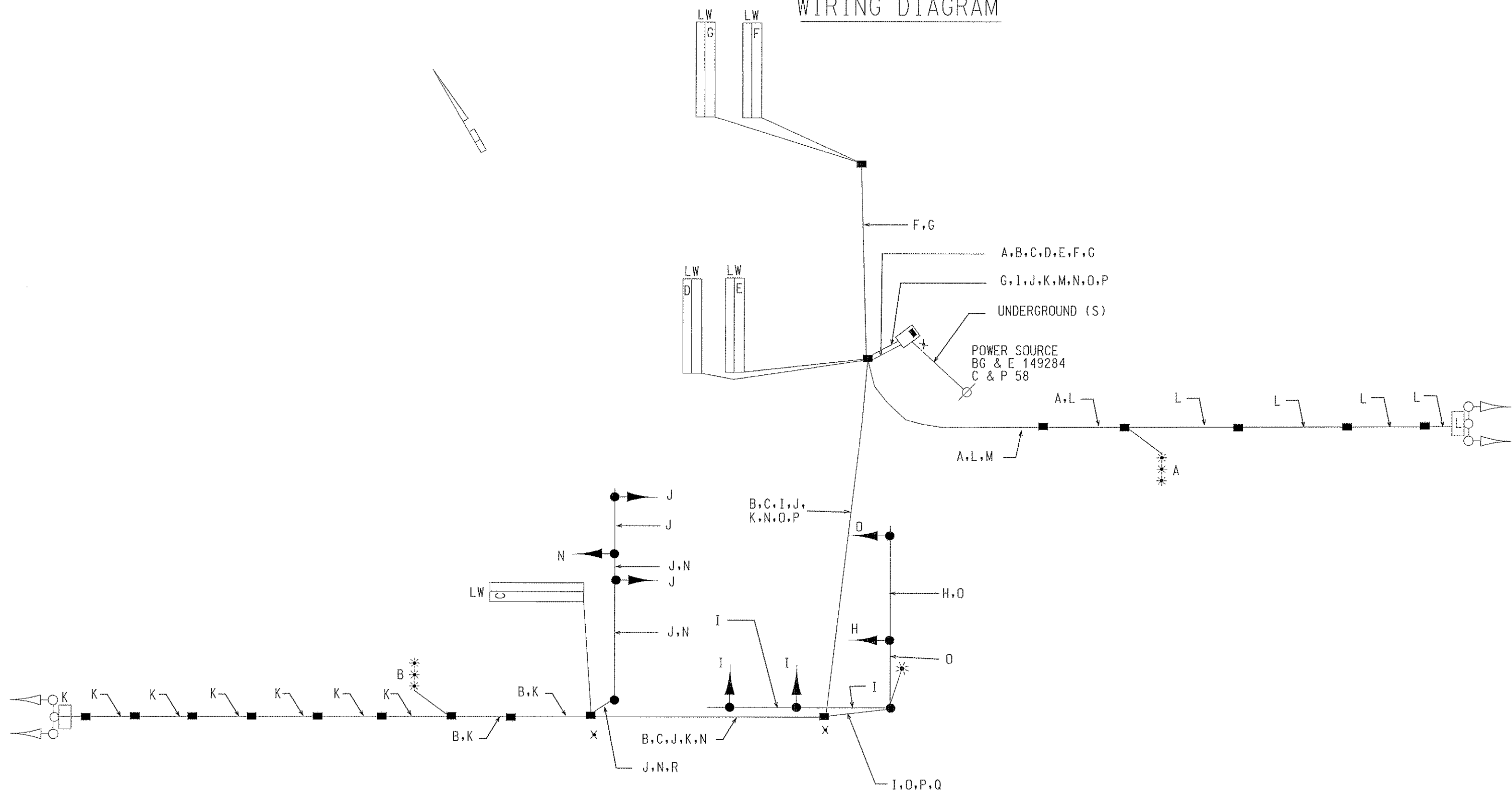
A. EQUIPMENT TO BE SUPPLIED BY SHA AND INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
900000	1 EA	FURNISH NEMA 6 BASE MOUNTED CABINET & CONTROLLER
900000	2 EA	FOUR CHANNEL RACK MOUNTED LOOP DETECTOR AMPLIFIER
9000000	3 EA	RELAY PACKAGE
9000000	95.5 SF	SHEET ALUMINUM SIGNS
-	2 EA.	S2-1(MOD) SIGN (36" X 42") "SCHOOL" - MAST ARM MOUNT
-	3 EA.	W3-3 SIGN (36" X 36") "SIGNAL AHEAD" - GROUND MOUNT
-	1 EA.	R10-12 SIGN (36" X 42") "LEFT TURN YIELD ON GREEN" - MAST ARM MOUNT
-	1 EA.	M95-1 (78" X 24") "MD 543 NORTH SOUTH" - MAST ARM MOUNT
-	2 EA.	D-3(2) SIGN (12" X 72") "C Milton Wright" - GROUND MOUNT BELOW W3-3
-	3 EA.	D95-25 SIGN (24" X 24") "NEW" -GROUND MOUNT ABOVE W3-3

B. EQUIPMENT TO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	QUANTITY	DESCRIPTION
120500	1 L.S.	MAINTENANCE OF TRAFFIC.
203030	3 CY.	TEST PIT.
585445	90 LF	FURNISH AND INSTALL 24" WHITE PERMANENT PREFORMED PAVEMENT MARKING TAPE (STOP BAR).
801004	13.3 CY	FURNISH AND INSTALL CONCRETE SIGNAL FOUNDATION.
8000000	20 LF	FURNISH AND INSTALL 4 IN. SCHEDULE 80 PVC CONDUIT - TRENCHED.
8000000	210 LF	FURNISH AND INSTALL 2 IN. SCHEDULE 80 PVC CONDUIT - TRENCHED.
8000000	2200 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 PVC CONDUIT - TRENCHED.
805115	225 LF	FURNISH AND INSTALL 3 IN. SCHEDULE 80 PVC CONDUIT - BORED.
805160	35 LF	FURNISH AND INSTALL 1 IN. LIQUID TIGHT FLEXIBLE NON-METALLIC CONDUIT SLEEVE.
811001	16 EA	FURNISH AND INSTALL HANDHOLE.
813015	44.5 SF	INSTALL OVERHEAD SIGNS.
802501	50 LF	FURNISH AND INSTALL STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG).
838003	1 EA	FURNISH AND INSTALL CONTROL AND DISTRIBUTION EQUIPMENT (120/240V, 1 PH, 3 W).
8000000	22 EA	FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION (BLACK FACED).
8000000	3 EA	FURNISH AND INSTALL 8 INCH VEHICULAR TRAFFIC SIGNAL HEAD SECTION (BLACK FACED).
861104	400 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR ALUMINUM SHIELDED.
861107	450 LF	FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR NO.14 AWG.
861108	2700 LF	FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR NO.14 AWG.
862101	2100 LF	FURNISH AND INSTALL LOOP WIRE IN FLEXIBLE TUBING.
862102	700 LF	FURNISH AND INSTALL SAW CUT FOR SIGNAL (LOOP DETECTOR).
8000000	1 EA	FURNISH AND INSTALL TWIN MAST ARM POLE 12 IN. X 27 FT. AND 50/50 FT. MAST ARM.
8000000	1 EA	FURNISH AND INSTALL SINGLE MAST ARM POLE 12 IN. X 21 FT. AND 50 FT. MAST ARM.
8000000	1 EA	FURNISH AND INSTALL MICROLOOP PROBE SET 500 FT. LEAD IN.
8000000	1 EA	FURNISH AND INSTALL MICROLOOP PROBE SET 1000 FT. LEAD IN.
8000000	125 LF	FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR NO.12 AWG TRAY CABLE.
871202	1 EA	INSTALL NEMA 6 BASE MOUNTED CABINET.
8000000	2 EA	CUT CLEAN, GALVANIZE AND CAP TRAFFIC SIGNAL STRUCTURE.
861117	35 SF	FURNISH AND INSTALL ELECTRICAL CABLE 3 WIRE (NO. 4 AWG).
837001	3 EA	FURNISH AND INSTALL GROUND ROD -3/4 INCH DIAMETER X 10 FOOT LENGTH.
8000000	1 EA	FURNISH AND INSTALL 250 WATT LUMINAIRE AND PHOTO CELL.
866101	1 EA.	FURNISH AND INSTALL 10 FOOT LIGHTING ARM FOR SIGNAL STRUCTURE.
813014	51 SF	INSTALL GROUND MOUNT SIGN.
801104	57 L.F.	FURNISH AND INSTALL WOOD SIGN SUPPORTS 4" X 4".

WIRING DIAGRAM



WIRING KEY

A,B	MICRO PROBE CABLE
C,D,E,F	2 CONDUCTOR ALUMINUM SHIELD (NO. 14 AWG)
G,H,I	5 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
J,K,L,M,N,O	7 CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)
P	2 CONDUCTOR ELECTRICAL CABLE (NO. 12 AWG) TRAY CABLE
Q,R	STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)
S	1 CONDUCTOR ELECTRICAL CABLE (NO. 4 AWG)
X	GROUND ROD

PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11
	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PHASE 1 & 6	FL/Y	FL/Y	R	R	FL/Y	FL/Y	G	G	G	R	R
PHASE 1 & 6 CHANGE	FL/Y	FL/Y	R	R	FL/Y	FL/Y	G	G	G	R	R
PHASE 2 & 6	FL/Y	FL/Y	G	G	FL/Y	FL/Y	G	G	G	R	R
PHASE 2 & 6 CHANGE	FL/Y	FL/Y	Y	Y	FL/Y	FL/Y	Y	Y	Y	R	R
PHASE 4	FL/Y	FL/Y	R	R	FL/Y	FL/Y	R	R	R	G	G
PHASE 4 CHANGE	FL/Y	FL/Y	R	R	FL/Y	FL/Y	R	R	R	Y	Y
FLASHING OPERATION	DARK	DARK	FL/Y	FL/Y	DARK	DARK	FL/Y	FL/Y	FL/Y	FL/R	FL/R

The Power Company Representative is:
BALTIMORE GAS AND ELECTRIC POWER COMPANY
7317 PARKWAY DRIVE SOUTH
BALTIMORE, MARYLAND 21076
(410) 859-9030

REVISIONS		APPROVALS		MARYLAND DOT - STATE HIGHWAY ADMINISTRATION Office of Traffic & Safety TRAFFIC ENGINEERING DESIGN DIVISION MD 543 @ C. MILTON WRIGHT H. S.			
		TEAM LEADER, TRAFFIC ENGINEERING DESIGN DIVISION		DRAWN BY: C. G. MUNZ CHECKED BY: C. G. MUNZ SCALE: N. T. S. DATE: 03/25/2000			
		ASST. CHIEF TRAFFIC ENGINEERING DESIGN DIVISION					
		CHIEF, TRAFFIC ENGINEERING DESIGN DIVISION					
		DIRECTOR, TRAFFIC & SAFETY		F.A.P. NO. S.H.A. NO. HAI995176 COUNTY: HARFORD LOG MILE: 12054308.75			
				TS. NO. 3987 T.I.M.S. NO. D676 SHEET NO. 10 OF 10			